

PTO/SB/08B (Modified)

Substitute for form PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

**Complete if Known**

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)	Application Number	09/225,687
	Filing Date	01/06/1999
	First Named Inventor	Mills
	Group Art Unit	1754
	Examiner Name	Tsang
Sheet 1	12	Attorney Docket Number 62-226-1

**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	58	R. L. Mills, "Classical Quantum Mechanics," Physics Essays, Vol. 16, No. 4, December, (2003), pp. 433-498. (Web Publication Date: May 23, 2002.)	
	60	R. L. Mills, J. Sankar, A. Voigt, J. He, B. Dhandapani, "Synthesis of HDLC Films from Solid Carbon," Journal of Materials Science, in press. (Web Publication Date: May 3, 2002.)	
	77	J. Phillips, R. L. Mills, X. Chen, "Water Bath Calorimetric Study of Excess Heat in 'Resonance Transfer' Plasmas," J. Appl. Phys., Vol. 96, No. 6, (2004) 3095-3102. (Web Publication Date: June 16, 2003.)	
	80	R. L. Mills, "The Fallacy of Feynman's Argument on the Stability of the Hydrogen Atom According to Quantum Mechanics," Annales de la Fondation Louis de Broglie, submitted. (Web Publication Date: Jan. 27, 2003.)	
	81	R. Mills, P. Ray, B. Dhandapani, W. Good, P. Jansson, M. Nansteel, J. He, A. Voigt, "Spectroscopic and NMR Identification of Novel Hydride Ions in Fractional Quantum Energy States Formed by an Exothermic Reaction of Atomic Hydrogen with Certain Catalysts," European Physical Journal: Applied Physics, 28, (2004), 83-104. (Web Publication Date: Feb. 21, 2003.)	
	88	R. Mills, J. Sankar, A. Voigt, J. He, P. Ray, B. Dhandapani, "Role of Atomic Hydrogen Density and Energy in Low Power CVD Synthesis of Diamond Films," Thin Solid Films, 478, (2005) 77-90. (Web Publication Date: Dec. 22, 2003.)	
	94	R. L. Mills, "The Nature of the Chemical Bond Revisited and an Alternative Maxwellian Approach," Physics Essays, in press. (Web Publication Date: Aug. 6, 2003.)	
	96	J. J. Phillips, C. K. Chen, R. L. Mills, "Evidence of the Production of Hot Hydrogen Atoms in RF Plasmas by Catalytic Reactions Between Hydrogen and Oxygen Species," Spectrochimica Acta Part B: Atomic Spectroscopy, submitted. (Web Publication Date: Sept. 12, 2003.)	
	97	R. L. Mills, P. Ray, B. Dhandapani, "Evidence of an Energy Transfer Reaction Between Atomic Hydrogen and Argon II or Helium II as the Source of Excessively Hot H Atoms in RF Plasmas," Journal of Plasma Physics, in press. (Web Publication Date: Sept. 26, 2003.)	
	98	R. L. Mills, Y. Lu, J. He, M. Nansteel, P. Ray, X. Chen, A. Voigt, B. Dhandapani, "Spectral Identification of New States of Hydrogen," New Journal of Chemistry, submitted. (Web Publication Date: Nov. 18, 2003.)	

Examiner  
Signature*Ausy Tsang Foster*Date  
Considered

9/1/2005



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Substitute for form 1449B/PTO

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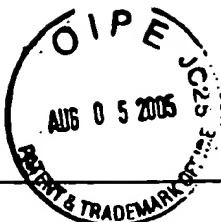
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)	<b>Application Number</b>		09/225,687	
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<b>Sheet</b>	2	12	<b>Attorney Docket Number</b>	62-226-1

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	100	R. Mills, B. Dhandapani, J. He, "Highly Stable Amorphous Silicon Hydride from a Helium Plasma Reaction," Materials Chemistry and Physics, submitted. (Web Publication Date: Nov. 17, 2003.)	
	101	R. L. Mills, Y. Lu, M. Nansteel, J. He, A. Voigt, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Division of Fuel Chemistry, Session: Chemistry of Solid, Liquid, and Gaseous Fuels, 227th American Chemical Society National Meeting, March 28-April 1, 2004, Anaheim, CA.	
	102	R. L. Mills, "Exact Classical Quantum Mechanical Solutions for One- through Twenty-Electron Atoms," Phys. Essays, submitted. (Web Publication Date: April 22, 2004.)	
	103	R. L. Mills, Dhandapani, W. Good, J. He, "New States of Hydrogen Isolated from K <sub>2</sub> CO <sub>3</sub> Electrolysis Gases," Electrochim. Acta, submitted. (Web Publication Date: April 28, 2004.)	
	104	R. L. Mills, Y. Lu, M. Nansteel, J. He, A. Voigt, W. Good, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Division of Fuel Chemistry, Session: Advances in Hydrogen Energy, 228th American Chemical Society National Meeting, August 22-26, 2004, Philadelphia, PA.	
	113	R. Mills, "Physical Solutions of the Nature of the Atom, Photon, and Their Interactions to Form Excited and Predicted Hydrino States", New Journal of Physics, submitted.	
	114	R. Mills, K. Akhtar, B. Dhandapani, "Tests of Features of Field-Acceleration Models for the Extraordinary Selective H Balmer $\alpha$ Broadening in Certain Hydrogen Mixed Plasmas," Journal of Applied Physics, submitted. (web publication June 24, 2005, www.blacklightpower.com).	

<b>Examiner Signature</b>	<i>Amy Tsang Foster</i>	<b>Date Considered</b>	9/1/2005
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	105	J. Phillips, C. K. Chen, R. L. Mills, "Evidence of Catalytic Production of Hot Hydrogen in RF Generated Hydrogen/Argon Plasmas," J. Appl. Physics, submitted. (Web Publication Date: September 7, 2004.)	
	106	R. L. Mills, "Exact Classical Quantum Mechanical Solution for Atomic Helium which Predicts Conjugate Parameters from a Unique Solution for the First Time," Foundations of Science, submitted. (Web Publication Date: October 28, 2004.)	
	107	R. L. Mills, "Maxwell's Equations and QED: Which is Fact and Which is Fiction," Physica Scripta, submitted. (Web Publication Date: October 28, 2004.)	
	108	R. L. Mills, J. He, M. Nansteel, B. Dhandapani, "Catalysis of Atomic Hydrogen to New Hydrides as a New Power Source," International Journal of Global Energy Issues (IJGEI). Special Edition in Energy System, submitted. (Web Publication Date: April 4, 2005.)	
	109	R. L. Mills, M. Nansteel, J. He, B. Dhandapani, "Low-Voltage EUV and Visible Light Source Due to Catalysis of Atomic Hydrogen," J. Plasma Physics, submitted. (Web Publication Date: April 15, 2005.)	
	110	R. L. Mills, J. He, Z. Chang, W. Good, Y. Lu, B. Dhandapani, "Catalysis of Atomic Hydrogen to Novel Hydrides as a New Power Source," Prepr. Pap.—Am. Chem. Soc., Div. Fuel Chem, 2005, 50(2). (Web Publication Date: April 22, 2005.)	
	111	R. L. Mills, J. He, Z. Chang, W. Good, Y. Lu, B. Dhandapani, "Catalysis of Atomic Hydrogen to Novel Hydrogen Species H <sup>+</sup> (1/4) and H <sub>2</sub> <sup>+</sup> (1/4) as a New Power Source," Thermochimica Acta, submitted. (Web Publication Date: May 6, 2005.)	
	112	R. L. Mills, J. He, Y. Lu, Z. M. Nansteel, Chang, B. Dhandapani, "Comprehensive Identification and Potential Applications of New States of Hydrogen," Central European Journal of Physics, submitted. (Web Publication Date: May 9, 2005.)	

Examiner Signature	<i>Aray Tsang Tsang</i>	Date Considered	9/1/05
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Substitute for Form 1449B (Rev. 10/01)

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Group Art Unit	1754
Examiner Name	Tsang
Attorney Docket Number	62-226-1

Sheet

4

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12

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		CRITCHLEY <i>et al.</i> , "Energy shifts and forbidden transitions in H <sub>2</sub> due to electronic g/u symmetry breaking", <i>Molecular Physics</i> , 2003, Vol. 104, Nos. 4-5, pp. 651-661, Taylor & Francis Ltd.	
		GAMBUS <i>et al.</i> , "Spectroscopic Study of Low-Pressure Water Plasmas and Their Reactions with Liquid Hydrocarbons", <i>Energy &amp; Fuels</i> , 2002, 16, pp. 172-176, American Chemical Society	
		CVETANOVIC <i>et al.</i> , "Excessive Balmer line broadening in a plane cathode abnormal glow discharge in hydrogen", <i>Journal of Applied Physics</i> , 97, 033302 (2005), American Institute of Physics	
		AKATSUKA <i>et al.</i> , "Stationary population inversion of hydrogen in an arc-heated magnetically trapped expanding hydrogen-helium plasma jet", <i>Physical Review E</i> , 49, 2, pp. 1534-1544, February, 1994, The American Physical Society	
		MURAKAMI <i>et al.</i> , "Chemisorption of hydrogen into a graphite-potassium intercalation compound C <sub>8</sub> K studied by means of positron annihilation", <i>J. Chem. Phys.</i> , 62 (10), May 15, 1995, American Institute of Physics	
		AHN, "Hydrogen Storage in Metal-Modified Single-Walled Carbon Nanotubes", Division of Engineering and Applied Science, California Institute of Technology, September 15, 2001	
		DUAN <i>et al.</i> , "Numerical calculation of energies of some excited states in a helium atom", <i>Eur. Phys. J., D</i> 19, (2002), pp. 9-12, Societa Italiana di Fisica, Springer-Verlag 2002	
		NIXON <i>et al.</i> , "Formation and structure of the potassium graphites", <i>Brit. J. Appl. Phys., Ser. 2</i> , Vol., 1, pp. 291-299, Great Britain, 2002	
		ZELLINGER, "Experiment and the foundations of quantum physics", <i>Reviews of Modern Physics</i> , Vol 71, No. 2, pp. S288-S297, Centenary 1999, The American Physical Society	

Examiner  
Signature*Ang Tsang Foster*Date  
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9/1/05

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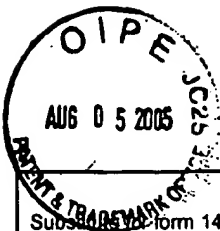
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				Group Art Unit	1754
				Examiner Name	Tsang
Sheet	5	of	12	Attorney Docket Number 62-226-I	

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		COTTON et al., "Complexes of Cyclic 2-Oxacarbenes. I. A Spontaneous Cyclization to Form a Complex of 2-Oxadicyclopentylidene", <i>Journal of the American Chemical Society</i> , 93:11, pp. 2672-2676, June 2, 1971	
		LINDSAY et al., "A remeasurement of the 2.4 $\mu$ m spectrum of $J = H_2$ pairs in a parahydrogen crystal", <i>Journal of Molecular Spectroscopy</i> , 218, Pp. 131-133, 2003	
		JUAREZ et al., "Photoelectron angular distributions of rotationally resolved states in para- $H_2^+$ : A closer to the dynamics of molecular photoionisation", The University of Manchester Atomic, Molecular & Laser Manipulation Group, pp.1-5	
		WEISSTEIN, "Ortho-Para Hydrogen", <a href="http://scienceworld.wolfram.com/physics/Ortho-ParaHydrogen.html">http://scienceworld.wolfram.com/physics/Ortho-ParaHydrogen.html</a>	
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		LEITCH et al., "Raman Spectroscopy of Hydrogen Molecules in Crystalline Silicon", <i>Physical Review Letters</i> , 81:2, pp. 421-424, July 13, 1998, The American Physical Society	
		CHEN et al., "Key to Understanding Interstitial $H_2$ in Si", <i>Physical Review Letters</i> , 88:10, pp. 105507-1 - 105507-4, March 11, 2002, The American Physical Society	
		CHEN et al., "Rotation of Molecular Hydrogen in Si: Unambiguous Identification of Ortho- $H_2$ and Para- $D_2$ ", <i>Physical Review Letters</i> , 88:24, pp. 245503-1 - 245503-4, June 17, 2002, The American Physical Society	
		LAVROV et al., "Ortho and Para Interstitial $H_2$ in Silicon", <i>Physical Review Letters</i> , 89:21, pp. 215501-1 - 215501-4, November 18, 2002, The American Physical Society	
		STAVOLA et al., "Interstitial $H_2$ in Si: are all problems solved?", <i>Physica B</i> , pp. 58-66, 200s Elsevier B.V.	

Examiner Signature	<i>Amy Tsang Foster</i>	Date Considered	9/1/2005
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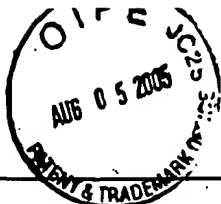
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		Group Art Unit	1754		
		Examiner Name	Tsang		
Sheet	6	of	12	Attorney Docket Number	62-226-1

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		MILLS et al., "Catalysis of Atomic Hydrogen to Novel Hydrides as a New Power Source", pp. 1-8, BlackLight Power, Inc.	
		DECIUS et al., "Force Constants of the Metaborate Ion in Alkali Halides", <i>The Journal of Chemical Physics</i> , 56:10, pp. 5189-5190, May 15, 1972	
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		SCHOENFELDER et al., "Kinetics of Thermal Decomposition of TiH <sub>2</sub> ", <i>J. Vac. Sci. Technol.</i> , 10:5, pp. 862-870, Sept./Oct. 1973	
		"Emission Characteristics for Scandium Type Dispenser Cathodes", HeatWave Labs, Inc., TB-119, May 24, 2001, Spectra-Mat, Inc.	
		"Emission Characteristics of 'M Type' Dispenser Cathodes", HeatWave Labs, Inc., TB-117, May 24, 2001, Spectra-Mat, Inc.	
		"Practical Aspects of Modern Dispenser Cathodes", <i>Microwave Journal</i> , September, 1979	

Examiner Signature	<i>Susy Tsang Tsche</i>	Date Considered	9/1/2005
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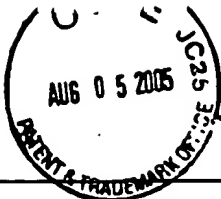
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		"Standard Series Barium Tungsten Dispenser Cathodes", HeatWave Labs, Inc., TB-198, July 29, 2002, Spectra-Mat, Inc.	
		ABATE <i>et al.</i> , "Optimization and enhancement of H <sup>+</sup> ions in a magnetized sheet plasma", <i>Review of Scientific Instruments</i> , 71:10, pp. 3689-3695, October 2000, American Institute of Physics	
		CHABERT <i>et al.</i> , "On the influence of the gas velocity on dissociation degree and gas temperature in a flowing microwave hydrogen discharge", <i>Journal of Applied Physics</i> , 84:1, pp. 161-167, July 1, 1998, American Institute of Physics	
		GORDON <i>et al.</i> , "Energy coupling efficiency of a hydrogen microwave plasma reactor", <i>Journal of Applied Physics</i> , 89:3, pp. 1544-1549, February 1, 2001, American Institute of Physics	
		RADOVANOVIĆ <i>et al.</i> , "Time-resolved Balmer-alpha emission from fast hydrogen atoms in low pressure, radio-frequency discharges in hydrogen", <i>Appl. Phys. Lett.</i> , 66:20, pp. 2637-2639, May 15, 1995	
		DJUROVIC <i>et al.</i> , "Hydrogen Balmer alpha line shapes for hydrogen-argon mixtures in a low-pressure rf discharge", <i>J. Appl. Phys.</i> , 74:11, pp. 6558-6565, December 1, 1993, American Institute of Physics	
		KONJEVIC, "Plasma Broadening and Shifting of Non-Hydrogenic Spectral Lines: Present Status and Applications", <i>Physics Reports</i> , 315, pp. 339-401, 1999, Elsevier	
		BENESCH <i>et al.</i> , "Line shapes of atomic hydrogen in hollow-cathode discharges", <i>Optics Letters</i> , 9:8, pp. 338-340, August 1984, Optical Society of America	
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		ADAMOV, <i>et al.</i> , "Doppler Spectroscopy of Hydrogen and Deuterium Balmer Alpha Line in an Abnormal Glow Discharge", <i>IEEE Transactions on Plasma Science</i> , 31:3, pp. 444-454, June 3, 2003	
Examiner Signature		<i>Away Tsang Foster</i>	Date Considered 9/1/05

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		JOVICEVIC <i>et al.</i> , "Excessive Balmer line broadcasting in microwave-induced discharges", <i>Journal of Applied Physics</i> , 95:1, pp. 24-29, January 1, 2004, American Institute of Physics	
		DJUROVIC <i>et al.</i> , "Hydrogen Balmer alpha line shapes for hydrogen-argon mixtures in a low-pressure rf discharge", <i>J. Appl. Phys.</i> , 74:11, pp. 6558-6565, December 1, 1993, American Institute of Physics	
		MAYO, "Thermalization and Energy Distribution in Cold Laboratory Plasmas Comments on the Possibility of Mono-Energetic Species", April 20, 2004	
		VIDENOVIC <i>et al.</i> , "Spectroscopic investigations of a cathode fall region of the Grimm-type glow discharge", <i>Spectrochimica Acta Part B</i> , 51, pp. 1707-1731, 1996	
		BARBEAU <i>et al.</i> , "Spectroscopic investigation of energetic atoms in a DC hydrogen flow discharge, pp. 1168-1174, 1990 IOP Publishing Ltd.	
		KONJEVIC <i>et al.</i> , "Emission Spectroscopy of the Cathode Fall Region of an Analytical Glow", <i>J. Phys. IV France</i> , 7, pp. C4-247-C4-258, October 1997	
		LIFSHITZ <i>et al.</i> , "Resonance absorption measurements of atom concentrations in reacting gas mixtures. I. Shapes of H and D Lyman- $\alpha$ lines from microwave sources", <i>J. Chem. Phys.</i> , 70:12, pp. 5607-5613, June 15, 1979, American Institute of Physics	
		KURAICA <i>et al.</i> , "Line shapes of atomic hydrogen in a plane-cathode abnormal glow discharge", <i>Physical Review A</i> , 46:7, pp. 4429-4432, October 1, 1992, The American Physical Society	
		KURAICA <i>et al.</i> , "On the Atomic Hydrogen Line Shapes in a Plane-Cathode Obstructed Glow Discharge", <i>Physica Scripta.</i> , 50, pp. 487-492, 1994	

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Sheet 9

of 12

Attorney Docket Number 62-226-1

**OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		OLTHOFF <i>et al.</i> , "Studies of Ion Kinetic-Energy Distributions in the Gaseous Electronics Conference RF Reference Cell", <i>Journal of Research of the National Institute of Standards and Technology</i> , 100:4, pp. 383-400, July-August 1995	
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		DJUROVIC <i>et al.</i> , "Hydrogen Balmer alpha line shapes for hydrogen-argon mixtures in a low-pressure rf discharge", <i>J. Appl. Phys.</i> , 74:11, pp. 6558-6565, December 1, 1993, American institute of Physics	
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		ARATA <i>et al.</i> , "Reproducible 'Cold' Fusion Reaction Using a Complex Cathode", <i>Fusion Technology</i> , 22, pp. 287-295, September 1992	
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Examiner  
Signature*Away Tsang Tsang*Date  
Considered

9/1/05

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PTO/SB/08B (Modified)

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

**Complete if Known**

Application Number	09/225,687
Filing Date	01/06/1999
First Named Inventor	Mills
Group Art Unit	1754
Examiner Name	Tsang
Attorney Docket Number	62-226-1

Sheet	10	of	12
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		D. Juggenholcher, U. Czarnetzki, and H.F. Dobe Institut fur Laser- und Plasmaphysik, Universitat Essen, Germany, "Investigations on Electric Field Distributions in a Microwave Discharge in Hydrogen"	
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		Evans Analytical Group, <a href="http://www.cea.com/inst.htm#esca2">http://www.cea.com/inst.htm#esca2</a> , "Time-of-Flight Secondary Ion Mass Spectrometry" (TOF-SIMS)	
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		Donald A. McQuarrie, "Quantum Chemistry", University Science Books, CA, 1983, relevant parts of Chapters 4, 6, and 8.	

Examiner Signature	<i>Amy Lee Foster</i>	Date Considered	9/1/05
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Substitute for form 149B/PTO

**INFORMATION DISCLOSURE  
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**Complete if Known**

Application Number	09/225,687
Filing Date	01/06/1999
First Named Inventor	Mills
Group Art Unit	1754
Examiner Name	Tsang
Attorney Docket Number	62-226-I

Sheet	11	of	12
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		E. Kovacevic, I. Stefanovic, J. Berndt, and J. Winter, "The Dynamic Response of the Plasma on the Dust Formation in Ar/C <sup>2</sup> H <sup>2</sup> RF Discharges." < <a href="http://www.rtpig.uni-greifswald.de/proceedings/data/kovacevic-1">http://www.rtpig.uni-greifswald.de/proceedings/data/kovacevic-1</a> >	
		N. Cvetanovic, M. M. Kuraica, N. Kopjevic, "Excessive Balmer Line Broadening in a Plane Cathode Abnormal Glow Discharge in Hydrogen", J. Appl. Phys. 97, 033302 (2005)	
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Examiner Signature	<i>Ausy Tsang Tsue</i>	Date Considered	9/1/05
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		First Named Inventor	Mills		
		Group Art Unit	1754		
		Examiner Name	Tsang		
Sheet	12	of	12	Attorney Docket Number	62-226-1

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		Quantum Physics 301, Paradoxes and Interpretation", < <a href="http://www.teach..phy.bris.ac.uk/level30100/CourseMaterials/paradoxes.pdf">http://www.teach..phy.bris.ac.uk/level30100/CourseMaterials/paradoxes.pdf</a> >	
		The Internet Encyclopedia of Philosophy, "Logical Positivism", < <a href="http://iep.utm.edu/logpos.htm">http://iep.utm.edu/logpos.htm</a> >	
		H. G. Kuhn, F. R. S., "Atomic Spectra", Longmans, Green & Co., Ltd., London/Harlow 1969 (2 <sup>nd</sup> ed.)	
		Anthony J. Marchese, Ph. D., Peter Jansson, Ph. D., P.E., John I. Schmalzel, Ph. D., P.E., "The Blacklight Rocket Engine", NIAC Phase 1 Final Report (May 1-November 30, 2002). <a href="http://www.niac.usra.edu/files/studies/final_report/">www.niac.usra.edu/files/studies/final_report/</a>	
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Examiner Signature	<i>Amey Tsang Tsang</i>	Date Considered	8/1/05
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